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I, JANENE PEISKER, TEAM LEADER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. 2004902591 for a patent by ANDREW POULOS and GORDON LAYARD as filed on 17 May 2004.



WITNESS my hand this  
Twelfth day of May 2005

A handwritten signature in cursive script, appearing to read 'J. M. + C.'.

JANENE PEISKER  
TEAM LEADER EXAMINATION  
SUPPORT AND SALES

**Australia**

**Patents Act 1990**

**Provisional Specification**

*Automated e-learning and presentation authoring system.*

Friday, 10 May 2004

The following statement is broad description of this invention.

### *Automated e-learning and presentation authoring system*

This invention relates to the creation of e-learning tutorials (typically browser based), the publishing of internet based content and the development of software for presentation purposes.

The development of e-learning tutorials, web based content generally and presentation software (collectively described here as 'electronic screen based product') is a laborious and time consuming task. All current 'authoring systems' used to generate electronic screen based product require the developer to use the same approach – that is, to develop the content on a screen-by-screen basis. While many systems provide intuitive interfaces to accelerate this process, with object oriented tools to facilitate the authoring of complex interactivity, they all require the user to build the product one screen at a time.

The present invention automates this process by creating the draft screens itself (without the necessity for the user to tag where a screen should begin or end) and dynamically inserting relevant graphics onto each screen as specified by various templates nominated by the user. A further function of the e-learning authoring system is to automatically create interactive activities which the tutorial student must complete and be assessed by. The user's role therefore changes from that of screen designer to screen editor as they analyse each screen and make changes as necessary. This change of role represents a significant time saving for the user.

Because of the time and cost involved in the traditional method of creating electronic screen based product, small and medium sized enterprises (SMEs) have typically been unable to take advantage of the technology. This is particularly the case of e-learning tutorials. The present invention will significantly reduce the time and cost of such development so that these organizations will be able to use the technology.

In one form the invention allows the user to quickly create e-learning tutorials or simple html or xml browser-based content. In another form the invention allows the user to quickly create a series of presentation slides in Microsoft PowerPoint format. In both cases, the system processes data provided by the user, in a text file (typically in Microsoft Word format). It systematically copies text to a predefined template-based screen until that screen is full and then does the same with the subsequent screen and continues in this manner until all text in the original source text file is allocated to a screen. Note that the original source text file may or may not include other media types such as graphics, video, sound or animations.

When the system is being used to create e-learning tutorials, the user may also have opted for the system to automatically create learning activities. These activities are automatically created at this time (they consist of sentences with missing words which the tutorial student must "drag and drop" to the appropriate location). The amount of text allocated to a screen will be dependent on the specific screen template or templates and the font size and type chosen by the user. Once all text is allocated, the system will then systematically analyse the text of each screen and search the system's library of graphics by keyword for a matching image based on parameters set by the user. Matching graphics are then inserted on the corresponding screen. Alternatively, the system will complete this process one screen at a time (ie determine

the amount and placement of text, find and insert an appropriate image and/or convert the text to an interactive activity). The resulting screen-builds may be visible to the user in order to show the progress of the automated conversion.

The system would typically involve a three part procedure on the part of the user: 1. Set-up, 2. Document conversion and 3. Editing. To assist with understanding the invention, brief reference will now be made to the accompanying diagrams of an indicative user interface that would allow users to create e-learning tutorials.

In the drawings:

FIG. 1 shows a set-up screen which allows the user to set various parameters relating to the tutorial to be created including parameters which relate to the template shape, the text size and type and the way graphics will be displayed and how graphics categories have been prioritised.

FIG. 2 shows a source file nomination screen whereby the user can nominate the source file or source files to be processed by the system. From this screen the user can direct the system to begin the conversion process.

FIG. 3. shows an editing screen. The screen allows the user to make changes to the completed screens that the system automatically generates.

A detailed description of the invention including appropriate diagrams will be included in the full patent application.

The core claims relating to the invention are as follows:

1. A system whereby text from a specified text-based document or documents is sequentially allocated across a number of resulting electronic 'documents', 'screens' or 'slides' according to various parameters determined by the template and font type and size chosen by the user.
2. The system, as set forth in claim 1, analyses the text from resulting electronic 'documents', 'screens' or 'slides' and then cross references the text against keywords associated with images found in a library of photographic and/or clip art images and then automatically inserts matching images into the 'documents', 'screens' or 'slides'.
3. The system, as set forth in claim 1, whereby a paragraph is automatically converted into an interactive drag and drop, "fill in the blanks" type questions and is automatically incorporated into an e-learning tutorial.

FIG. 1 – Potential Set-up Screen

<p><b>Course Details</b></p> <p>Course Name: <input style="width: 150px;" type="text"/></p> <p>Description: <div style="border: 1px solid black; height: 40px; width: 150px; margin-top: 5px;"></div></p> <hr/> <p><b>Buttons</b></p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input checked="" type="radio"/> Forward button         </div> <div style="text-align: center;"> <input type="radio"/> Back button         </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="radio"/> Menu button         </div> <div style="text-align: center;"> <input checked="" type="radio"/> Quit button         </div> </div> <hr/> <p><b>Logo</b></p> <div style="display: flex; align-items: center; margin-top: 10px;"> <span style="margin-right: 10px;">File Name:</span> <input style="width: 60px;" type="text"/> <input style="margin-left: 10px;" type="button" value="Browse"/> <div style="border: 1px solid black; padding: 2px; margin-left: 10px; text-align: center;"> </div> </div>	<p><b>Appearance</b></p> <div style="margin-top: 10px;"> <input type="radio"/> Text only         <input checked="" type="radio"/> Text and graphics       </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Template</div> <div style="border-left: 1px solid black; width: 15px; height: 15px; background: black;"></div> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100px;"> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Interface</div> <div style="border-left: 1px solid black; width: 15px; height: 15px; background: black;"></div> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100px;"> </div> </div> <div style="margin-top: 10px;"> <p>Graphic size: <input type="radio"/> Small <input checked="" type="radio"/> Medium <input type="radio"/> Large <input type="radio"/> Random</p> <p>Background Colour <div style="display: inline-block; width: 50px; height: 15px; border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div></p> <p>Font: <div style="border: 1px solid black; padding: 2px; display: inline-block;">Arial</div> <div style="border-left: 1px solid black; width: 15px; height: 15px; background: black;"></div> Size <div style="border: 1px solid black; padding: 2px; display: inline-block;">14</div> <div style="border-left: 1px solid black; width: 15px; height: 15px; background: black;"></div> Colour <div style="display: inline-block; width: 15px; height: 15px; background: black;"></div></p> </div>								
<p><b>Preferences</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">Interactivity</th> <th style="width: 25%;">Graphics</th> <th style="width: 25%;">Functionality</th> <th style="width: 25%;">Construction</th> </tr> <tr> <td style="vertical-align: top;"> <input checked="" type="checkbox"/> Automatically generate graphics  <input checked="" type="checkbox"/> Automatically resume  <input checked="" type="checkbox"/> Provide feedback w/ each quest.  <input checked="" type="checkbox"/> Force question completion         </td> <td></td> <td style="vertical-align: top;"> <input checked="" type="checkbox"/> Ensure correct answer for each q.  <input checked="" type="checkbox"/> Login system enabled  <input checked="" type="checkbox"/> Generate final assessment screen  <input checked="" type="checkbox"/> Manual page breaks force new sc         </td> <td style="vertical-align: top;"> <input checked="" type="checkbox"/> Include question done button  <input checked="" type="checkbox"/> Include source doc graphics         </td> </tr> </table>		Interactivity	Graphics	Functionality	Construction	<input checked="" type="checkbox"/> Automatically generate graphics <input checked="" type="checkbox"/> Automatically resume <input checked="" type="checkbox"/> Provide feedback w/ each quest. <input checked="" type="checkbox"/> Force question completion		<input checked="" type="checkbox"/> Ensure correct answer for each q. <input checked="" type="checkbox"/> Login system enabled <input checked="" type="checkbox"/> Generate final assessment screen <input checked="" type="checkbox"/> Manual page breaks force new sc	<input checked="" type="checkbox"/> Include question done button <input checked="" type="checkbox"/> Include source doc graphics
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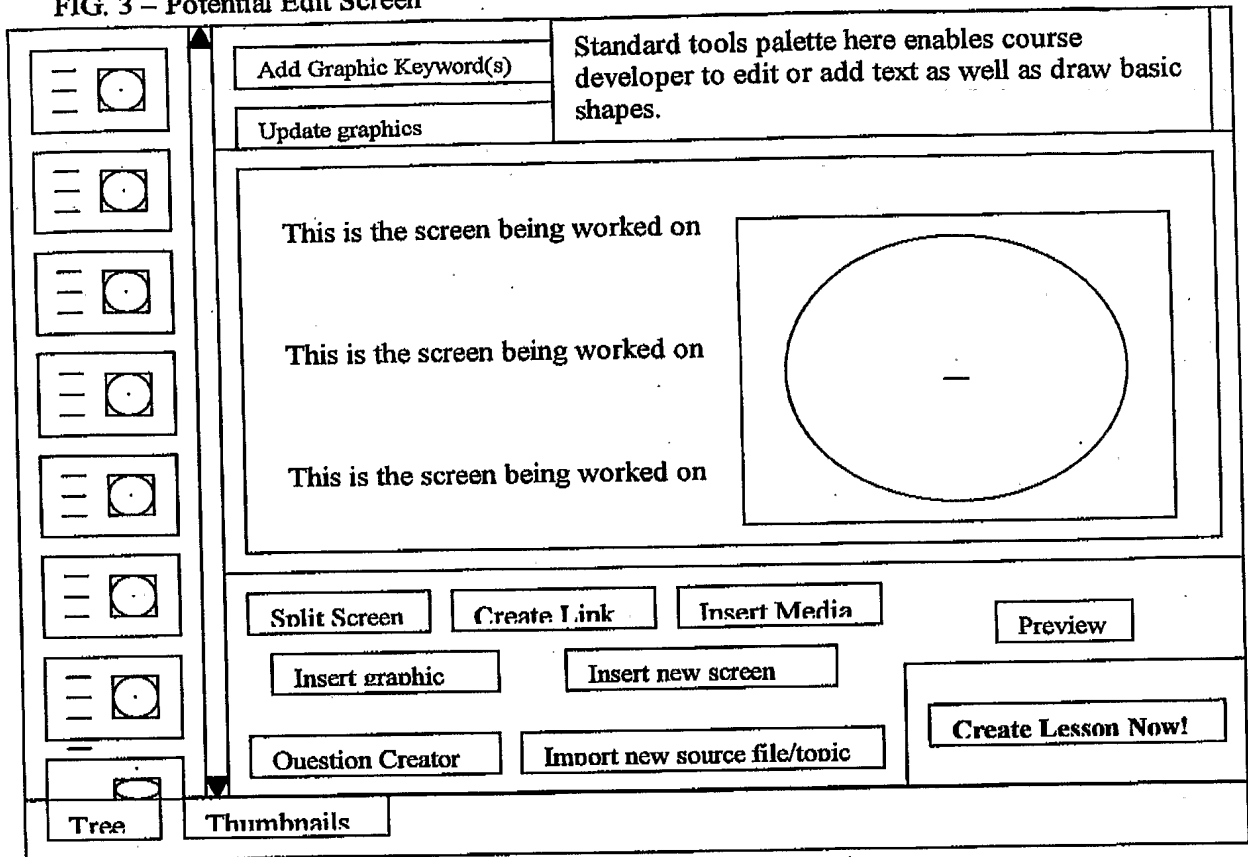
FIG. 2 – Potential Source File Nomination Screen

Linear Lessons			
Source doc:	<input type="text"/>	<input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment

Menu Based Lessons (name each topic below and provide source document file name and location)			
Topic 1 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 2 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 3 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 4 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 5 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 6 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 7 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 8 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 9 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 10 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 11 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment
Topic 12 name:	<input type="text"/>	Source doc: <input type="text"/> <input type="button" value="Browse"/>	<input checked="" type="checkbox"/> include in final assessment

FIG. 3 – Potential Edit Screen



**Applicants:**

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